

Barsun et al.

S/N: 10/737,377

In the Claims

1. (Currently Amended) An apparatus, comprising: a plurality of levers that convert a lesser input force to a greater output force for support of a heatsink component coupled with an electronic component;

wherein the plurality of levers comprises a first lever and a second lever; wherein the first lever comprises a leaf spring or wireform lever that converts the lesser input force to an intermediate force on the second lever, wherein the intermediate force is greater than the lesser input force;

wherein the second lever converts the intermediate force on the second lever to the greater output force, wherein the greater output force is greater than the intermediate force; wherein the second lever employs the greater output force for support of the heatsink component.

2. (Currently Amended) The apparatus of claim 1, wherein the plurality of levers ~~comprise a first lever and a second lever; wherein the first lever converts the lesser input force to an intermediate force on the second lever, wherein the intermediate force is greater than the lesser input force; wherein the second lever converts the intermediate force on the second lever to the greater output force, wherein the greater output force is greater than the intermediate force; wherein the second lever employs the greater output force for support of the heatsink component~~comprises one or more leaf springs and one or more wireform levers.

3. (Currently Amended) The apparatus of claim 2~~1~~, wherein the first lever comprises a first effort point and a first load point, wherein the second lever comprises a second effort point and a second load point; wherein the first lever receives the lesser input force through the first effort point and applies the intermediate force to the second lever through the first load point; wherein the second lever receives the intermediate force through the second effort point and applies the greater output force to the heatsink component through the second load point; wherein the second lever applies the output force to the heatsink component through the second load point for support of the heatsink component.

4. (Currently Amended) The apparatus of claim 2~~1~~, wherein the second lever applies the greater output force against the heatsink component to secure the heatsink component against one or more portions of the electronic component.

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5. (Currently Amended) The apparatus of claim 21, wherein the second lever comprises a second class lever that comprises a fulcrum that abuts one or more portions of the electronic component for support.

6. (Original) The apparatus of claim 5, wherein the one or more portions of the electronic component comprise one or more first portions of the electronic component, wherein the first lever comprises a second class lever that comprises a fulcrum that abuts one or more second portions of the electronic component.

7. (Original) The apparatus of claim 6, wherein the second lever supports the first effort point of the first lever; wherein the first lever comprises a fulcrum that engages an abutment portion of the electronic component to promote stabilization of the fulcrum of the first lever.

8. (Original) The apparatus of claim 1 in combination with the heatsink component, wherein the heatsink component comprises a substantially flat base that promotes distribution of the greater output force over a face portion of the electronic component.

9. (Original) The apparatus of claim 8, wherein the heatsink component conducts at least a portion of heat away from the electronic component.

10. (Original) The apparatus of claim 9, wherein operation of the electronic component generates at least a major portion of the heat, wherein the heatsink component cools the electronic component through conduction away from the electronic component of at least a subportion of the major portion of the heat.

11. (Original) The apparatus of claim 1, wherein one or more levers of the plurality of levers are selectively engageable with one or more fastener components for stability of the one or more levers.

12. (Original) The apparatus of claim 1, wherein one or more levers of the plurality of levers comprise one or more wireform levers.

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13. (Original) The apparatus of claim 1, wherein one or more levers of the plurality of levers comprise one or more leaf springs that serve to maintain the greater output force on the heatsink component within a predetermined tolerance range.

14. (Original) The apparatus of claim 13, wherein upon one or more of shock and vibration of the electronic component the one or more leaf springs serve to maintain a thermal interface between the heatsink component and the electronic component in an effective heat conduction relationship.

15. (Original) The apparatus of claim 1, wherein the plurality of levers comprise a first lever and a second lever, wherein the first lever acts on the second lever to convert the lesser input force to the greater output force for support of the heatsink component.

16. Canceled.

17. Canceled.

18. (Currently Amended) The method of claim ~~17~~ 20, further comprising the step of: securing one or more of the first and second levers from movement through employment of one or more fastener components to promote an increase in uniformity of one or more of the intermediate force on the first lever and the output force on the heatsink component.

19. (Currently Amended) The method of claim ~~17~~ 20, wherein the first lever comprises a leaf spring, wherein the step of applying the first input force to the first lever to transmit the output force to the heatsink component coupled with the electronic component comprises the step of:

compressing the leaf spring with the first input force to apply the output force on the heatsink component.

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20. (Currently Amended) ~~The method of claim 17,~~ A method, comprising the step of:

arranging a plurality of levers in a cooperative relationship that promotes an increase in an output force that supports a heatsink component coupled with an electronic component;

wherein the plurality of levers comprise a first lever and a second lever, wherein the step of arranging the plurality of levers in the cooperative relationship that promotes an increase of the output force to support the heatsink component coupled with the electronic component comprises the steps of: applying a first input force to the first lever to transmit the output force to the heatsink component coupled with the electronic component; and applying a second input force to the second lever to transmit an intermediate force to the first lever that promotes an increase of the output force on the heatsink component;

wherein the second lever comprises a leaf spring, wherein the step of applying the second input force to the second lever to transmit the intermediate force to the first lever that promotes the increase of the output force on the heatsink component comprises the step of: compressing the leaf spring with the second input force to apply the intermediate force on the first lever.

21. (Currently Amended) ~~The method of claim 17,~~ 20, wherein the step of arranging the plurality of levers in the cooperative relationship that promotes the increase in the output force that supports the heatsink component coupled with the electronic component comprises the step of:

maintaining a thermal interface between the heatsink component and the electronic component during one or more of shock and vibration of the electronic component.

22. (Original) The method of claim 21, wherein the plurality of levers comprise one or more leaf springs, wherein the step of maintaining the thermal interface between the heatsink component and the electronic component during the one or more of the shock and vibration of the electronic component comprises the step of:

maintaining the output force within a predetermined tolerance range through employment of the one or more leaf springs.

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23. (Currently Amended) An apparatus, comprising:

~~means for converting a lever that comprises a leaf spring or wireform lever that converts~~
a lesser input force to an intermediate force, wherein the intermediate force is greater than the lesser input force; and

means for converting the intermediate force to a greater output force on a heatsink component coupled with an electronic component, wherein the greater output force is greater than the intermediate force;

means for coupling the ~~means for converting lever that comprises the leaf spring or wireform lever that converts~~ the lesser input force to the intermediate force with one or more of the electronic component and the means for converting the intermediate force to the greater output force on the heatsink component coupled with the electronic component;

means for coupling the means for converting the intermediate force to the greater output force on the heatsink coupled with the electronic component with the electronic component.

24. (Currently Amended) The apparatus of claim 23, further comprising:

means for securing one or more of:

the means for converting the intermediate force to the greater output force on the heatsink component; and

the ~~means for converting lever that comprises the leaf spring or wireform lever that converts~~ the lesser input force to the intermediate force on the means for converting the intermediate force to the greater output force on the heatsink component.

25. (Original) The apparatus of claim 23, further comprising:

means for connecting the heatsink component and the means for converting the intermediate force to the greater output force on the heatsink component.

26. (Currently Amended) A method, comprising the steps of:

converting a lesser input force to an intermediate force through employment of a first lever that comprises a leaf spring or wireform lever, wherein the intermediate force is greater than the lesser input force; and

converting the intermediate force to an output force on a heatsink component through employment of a second lever, wherein the output force is greater than the intermediate force.

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27. (Original) The method of claim 26, further comprising the step of:
securing one or more of the first and second levers to maintain the output force on the
heatsink component.

28. (Original) The method of claim 26, further comprising the step of:
connecting the heatsink component and one or more of the first and second levers.

29. (New) The method of claim 20, wherein the plurality of levers comprises a
plurality of leaf springs, wherein the step of arranging the plurality of levers in the cooperative
relationship that promotes the increase in the output force that supports the heatsink component
coupled with the electronic component comprises the step of:

arranging the plurality of leaf springs in the cooperative relationship that promotes the
increase in the output force that supports the heatsink component coupled with the electronic
component.

30. (New) The method of claim 20, wherein the plurality of levers comprises one or
more leaf springs and one or more wireform levers, wherein the step of arranging the plurality of
levers in the cooperative relationship that promotes the increase in the output force that supports
the heatsink component coupled with the electronic component comprises the step of:

arranging the more leaf springs and the one or more wireform levers in the cooperative
relationship that promotes the increase in the output force that supports the heatsink component
coupled with the electronic component.